



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

The U.S. Environmental Protection Agency, in cooperation with other federal agencies, has prepared the *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2002*. The estimates of emissions and removals contained in this report, along with future updates, will be used to monitor and track the progress of the United States in meeting our commitments under the United Nations Framework Convention on Climate Change (UNFCCC).

In accordance with a decision of the Conference of Parties to the UNFCCC (Decision 3/CP.5), this inventory complies with the UNFCCC Reporting Guidelines on Annual Inventories (FCCC/CP/1999/7). Adherence to these guidelines ensures that national inventories are well documented, consistently prepared, and as accurate and complete as possible. The assumptions and methodologies used in this report have been clearly explained, and are based on the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* and the *IPCC Report on Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*.

Each year, advances in scientific understanding and availability of underlying data allow us to improve the quality and comprehensiveness of the inventory. Some of this year's advances include improved estimates for iron and steel production, carbon dioxide consumption, the substitution of ozone depleting substances, electrical transmission and distribution, manure management, agricultural soil management, and the changes in forest carbon stocks. Also, included for the first time this year are new emissions data on abandoned underground coal mines.

Another notable change to this year's report is the new report structure, which conforms with the new UNFCCC reporting requirements for inventory reports.

We hope that these improvements make this document more useful, and appreciate the comments and suggestions we have received from numerous reviewers in both the scientific community and the general public.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey R. Holmstead", is written over the typed name and title.

Jeffrey R. Holmstead
Assistant Administrator

**INVENTORY OF U.S. GREENHOUSE GAS
EMISSIONS AND SINKS:
1990 – 2002**

APRIL 15, 2004

**U.S. Environmental Protection Agency
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U.S.A.**

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Work on fuel combustion and industrial process emissions was led by Leif Hockstad and Lisa Hanle. Work on energy and waste sector methane emissions was directed by Elizabeth Scheehle, while work on agriculture sector emissions was directed by Tom Wirth and Joe Mangino. Tom Wirth led the preparation of the chapter on Land-Use Change and Forestry. Work on emissions of HFCs, PFCs, and SF₆ was directed by Deborah Schafer and Dave Godwin. Veronika Pesinova and John Hall directed the work on mobile combustion.

Within the EPA, other Offices also contributed data, analysis and technical review for this report. The Office of Transportation and Air Quality and the Office of Air Quality Planning and Standards provided analysis and review for several of the source categories addressed in this report. The Office of Solid Waste and the Office of Research and Development also contributed analysis and research.

The Energy Information Administration and the Department of Energy contributed invaluable data and analysis on numerous energy-related topics. The U.S. Forest Service prepared the forest carbon inventory, and the Department of Agriculture's Agricultural Research Service and the Natural Resource Ecology Laboratory at Colorado State University contributed leading research on nitrous oxide and carbon fluxes from soils.

Other government agencies have contributed data as well, including the U.S. Geological Survey, the Federal Highway Administration, the Department of Transportation, the Bureau of Transportation Statistics, the Department of Commerce, the National Agricultural Statistics Service, the Federal Aviation Administration, and the Department of Defense.

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Preface

The United States Environmental Protection Agency (EPA) prepares the official *U.S. Inventory of Greenhouse Gas Emissions and Sinks* to comply with existing commitments under the United Nations Framework Convention on Climate Change (UNFCCC).¹ Under decision 3/CP.5 of the UNFCCC Conference of the Parties, national inventories for UNFCCC Annex I parties should be provided to the UNFCCC Secretariat each year by April 15.

In an effort to engage the public and researchers across the country, the EPA has instituted an annual public review and comment process for this document. The availability of the draft document is announced via Federal Register Notice and is posted on the EPA web site.² Copies are also mailed upon request. The public comment period is generally limited to 30 days; however, comments received after the closure of the public comment period are accepted and considered for the next edition of this annual report.

¹ See Article 4(1)(a) of the United Nations Framework Convention on Climate Change <<http://www.unfccc.int>>.

² See <<http://www.epa.gov/globalwarming/publications/emissions>>.